Recent Trade Shifts in the Des Moines / West Des Moines Metropolitan Region

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Introduction

There has been a persistent shift in jobs, people, and trade into Iowa's metropolitan areas over the past 15 years. Between 1990 and 2005, population in Iowa's metropolitan areas grew by more than twice the rate as the state as a whole, and from just 2000 to 2005, Iowa's metropolitan areas posted three times the rate of growth as the state. The Des Moines / West Des Moines Metropolitan Statistical Area led the state in growth posting an 8.3 percent gain since 2000, and, concomitantly, it has accumulated a larger and larger portion of the state's retail and service activities over the years.

This study examines a particular period in the metropolitan area's growth. A large expansion in shopping capacity was introduced at the Jordon Creek Town Center area of West Des Moines in late 2004. As that project developed, concerns were voiced about the impact of the development on the overall retail and service health of the region: the supposition was that gains in the newer areas would come at the expense of existing malls and trade areas in the region. There have been notable expansions in several other parts of the metropolitan area as well. Altoona and Ankeny both posted strong gains in commercial activity within their municipal boundaries during this period as well. Still, the largest concentration of new commercial development was in the Dallas County portion of West Des Moines. This research looks at metropolitan-wide trade in fiscal 2006, one full year after the Jordon Creek expansion, compared with fiscal 2004, the fiscal year prior to the opening of the development.

This analysis allows us to gauge the magnitude of trade changes accumulating to the MSA as a whole, and the extent to which trade shifted within the region. It sorts out the area trade winners and losers.

The study area is the Des Moines / West Des Moines MSA consisting of Polk, Dallas, Warren, Madison, and Guthrie County (called hereafter the MSA). Trade and service sales statistics are compiled for all of the cities for which the Iowa Department of Revenue and Finance (IDRF) collects data, so our analysis allows us to determine city level effects. Additionally, as retail trade data in Iowa are reported at the county level, if a city straddles a county boundary, the IDRF splits the data for a city into two counties. This is particularly advantageous for this analysis because the Jordon Creek Town Center development is in the Dallas County portion of West Des Moines.

Methods, Data, and Adjustments

Iowa State University researchers have compiled retail trade statistics for Iowa's cities and counties for years. The data used for this analysis come from Iowa Department of Revenue and Finance annual retail trade reports. Our measurement of net changes in trade, however, requires several adjustments that allow us to standardize our results.

First, as we are dealing with economic values over time, we need to remove the effects of inflation. The statistics that we report will be in estimated constant (or inflation adjusted) 2006 amounts.

Next, as was already mentioned, the region is not static: jobs, people, and incomes are changing in all of the areas that we are studying. Our analysis factors in the effects of income and people growth in all the cities that were measured in order to gauge expected levels of retail consumption and retail change over the measurement period. Growing places would be expected to have more sales than declining places. Similarly, communities that were accumulating incomes faster than surrounding areas would be expected to have more purchasing power.

Population estimates for the measured cities and counties come directly from the U.S. Bureau of the Census. Adjustments for income change were made using a combination of data. Metropolitan area per capita incomes are available from the U.S. Bureau of Economic Analysis. Next, we adjust for variations in per capita income across communities using school district level data on state income tax filings. This adjustment allows our wealthier communities both in total and on a per capita basis to have greater expected purchasing power than those in communities with lower per capita incomes.[*]

Last, as part of our analysis, we translate our results into full-time shopper equivalents. This is a measure of the annual purchasing power of one person – a representative Iowa consumer. It allows us to translate *x* amount of sales change into *y* amount of shoppers. It gives an intuitively clear sense of the magnitude of change that occurred during the period measured.

Findings

Detailed city and county level summaries of our analysis are contained in the tables at the end of the report. There are two areas of interest in this

[*] Lower income consumers dedicate higher fractions of their incomes towards the consumption of retail goods and services than persons with higher incomes. Our data made adjustments for area income levels using factors derived from the Current Population Survey that measures the difference in retail and service purchases by income level. These factors were applied to our communities to estimate per capita consumption.

assessment: the overall performance of the MSA as a large and growing trade center, and the overall pattern of change that occurring within the MSA.

Metropolitan Area Changes

The MSA's retail trade position improved markedly relative to the rest of the state comparing fiscal 2006 and 2004. The details of that improvement are explained below:

- Real total retail sales in the 5-county MSA increased 5.5 percent between fiscal 2004 and fiscal 2006. This rate far exceeded the statewide total rate of 1 percent. After adjusting for inflation, retail and service sales in the metropolitan area grew by $387.8 million.

- The real rate of trade growth also exceeded the rate of growth in MSA population. According to U.S. Census estimates, the MSA added 18,400 new residents for a gain of 3.6 percent over the measurement period. This suggests the region is exporting sales to non MSA consumers.

- Real Per Capita income in the region also grew during the 2-year period by 4.5 percent. Although this rate slightly lagged the statewide average of 4.9 percent, MSA incomes were still 19 percent higher than the Iowa average in fiscal 2006.

- Together, the effects of population and income growth within the metropolitan region accounted for an estimated $210 million of the total $387.8 million change in total retail sales. The remaining 46 percent of new trade and service activity in the region represents sales to non-residents of the metropolitan region.

- Translated into annualized, statewide average "shopper-equivalents," the five-county MSA gained 20,027 new resident shoppers due to population and income growth coupled with 16,952 shoppers from outside the region for a total of 36,979 new shoppers (full-time shopper equivalents) in 2006 compared to 2004. A full-time shopper equivalent represents a full-year's worth of retail and service consumption for one person, not just a shopping trip.

Intra-Metropolitan Shifts

While the region as a whole grew strongly, there were strong shifts within the MSA in trade activity during this period. A summary of those shifts follows:

- The Dallas County portion of West Des Moines is where the Jordan Creek development was concentrated, and it experienced the largest increase in total retail sales in the MSA. It posted $310.8 million more real sales in 2006 than it had in 2004. Nearly 100 percent of this growth was driven by capture of customers from other communities inside and outside the MSA.

- Altoona and Ankeny ranked second and third, respectively, in terms of total retail sales growth. Altoona's sales grew by $104 million, or by 9,912 new full-time shopper equivalents per year. Only about 14 percent of this increase was explained by local income and population growth, and the remaining 86 percent represented sales captured from non-Altoona residents. Ankeny's growth is different. About 83 percent of Ankeny's $74.6 million increase in sales was likely due to the city's own income and population growth, and 17 percent represents new sales captured from non-resident shoppers.

- In stark contrast, Des Moines experienced the region's greatest loss, as real total sales declined by $193.6 million over the same period. Just over one quarter of this sales decline can be attributed to population loss and slight erosions in average incomes of city residents. The city lost an estimated $49.9 million in expected sales considering these factors. The remainder of the city's loss, $143.7 million, represented the net value of retail and service trade shifts elsewhere. When the loss in people and the loss in competitive position were translated into a shopper basis, the city of Des Moines' merchants lost 18,460 full-time (year-round) shopper equivalents comparing the two years.

- The Polk County portion of West Des Moines had the second highest drop in real sales. Based on the population and income growth that occurred in that area, we would have expected sales levels to increase by $22.3 million. Instead, Fiscal 2006 sales for this portion of the city were $22 million lower than in Fiscal 2004. In shopper equivalents, the area should have gained 2,122 full-time resident shoppers and instead lost 4,219 resident shoppers, ending the period with 2,097 (net) fewer shoppers than it began with.

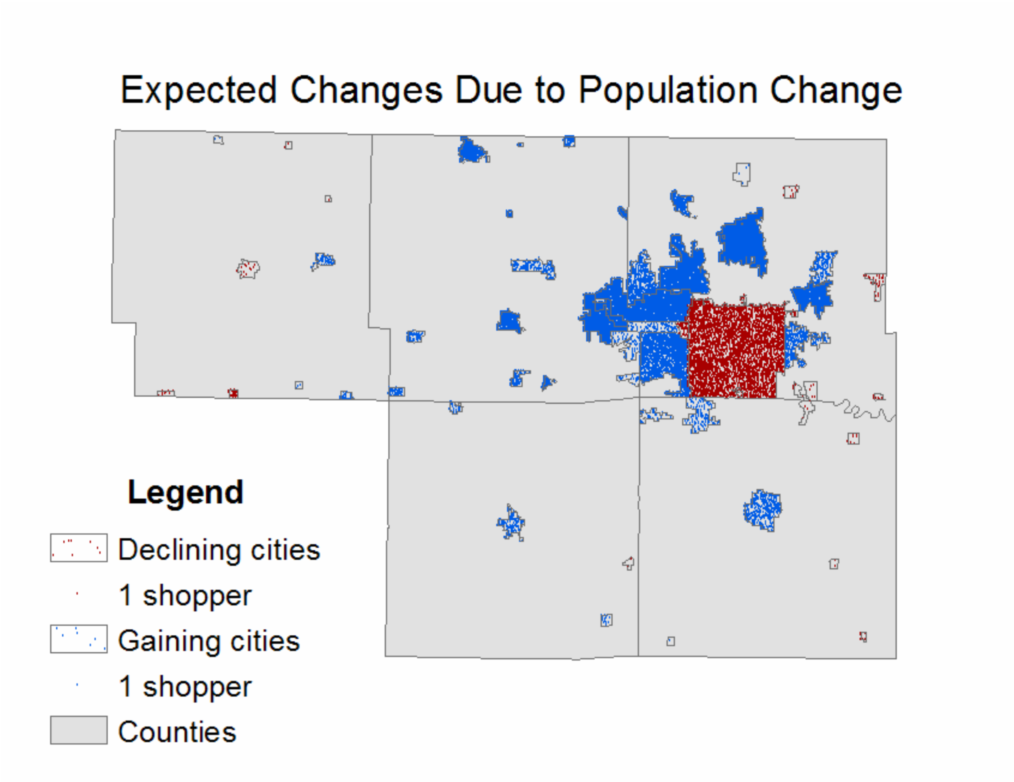
- The city of Perry in Dallas County experienced the third highest drop in sales in the region. The city's expected sales growth based on local income and population change was $6.6 million, or 633 full-time shopper-equivalents. Instead, 2,165 full-time shopper equivalents were lost to other trade areas, leaving the city with a net loss of 1,532 shoppers and a sales drop of $16.1 million.

- Because the MSA area as a whole experienced net gains in its competitive position relative to the state, the net competitive losses in Des Moines and West Des Moines-Polk likely accrued to other communities within the metro area.

A visual representation of the shifts that have occurred in the MSA area comparing 2004 and 2006 is displayed in the following three figures. These are dot-density representations of the three components of change. Each dot represents one full-time shopper equivalent, with red indicating losses and blue indicating gains.

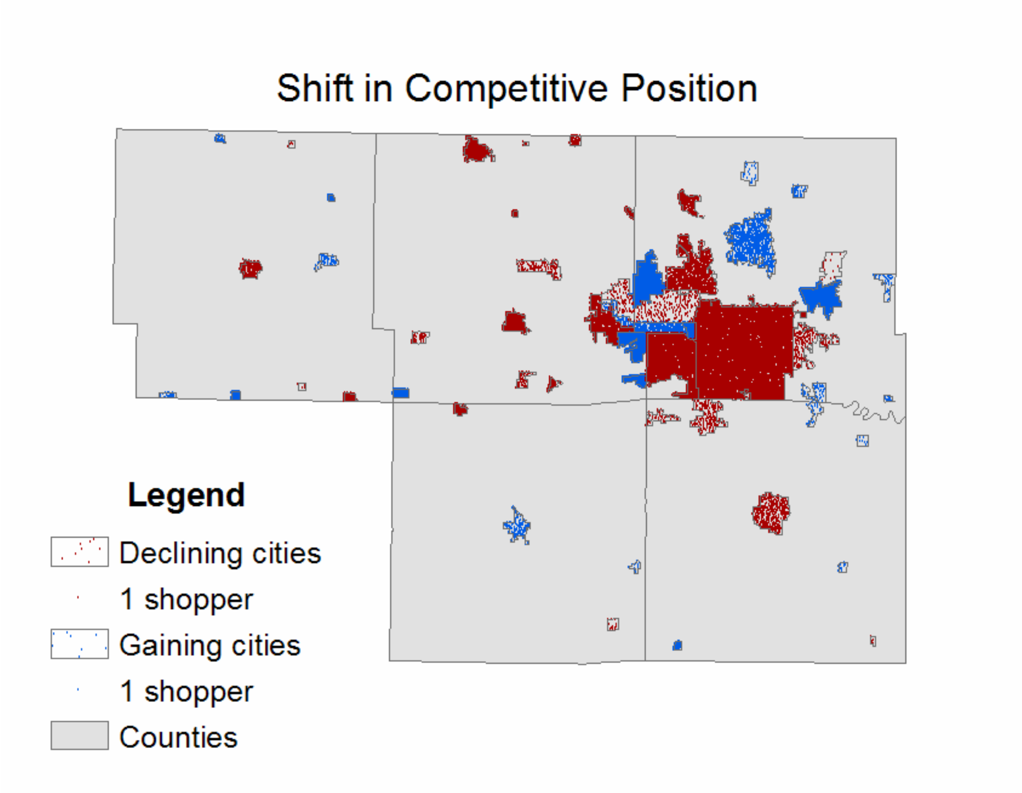
Map 1 shows the expected change in full time shoppers that would be explained by population and income changes. As is quite evident, with the exception of the city of Des Moines, most of the major cities in the metropolitan area would have been expected to have sales increases.

Map 1.



The next map controls for all expected changes in population and income for our communities and only represents our estimate of the communities' shifts in competitive position considering all retail trade in Iowa, not just the MSA. While we have only highlighted major gains and losses in our summary analysis above, it is very evident that there have been strong comparative erosions in shopper equivalents across the whole five county MSA. In Dallas County, except for the urbanized-area portions of West Des Moines and Clive and the city of Dexter, all other Dallas County communities posted strong net competitive declines.

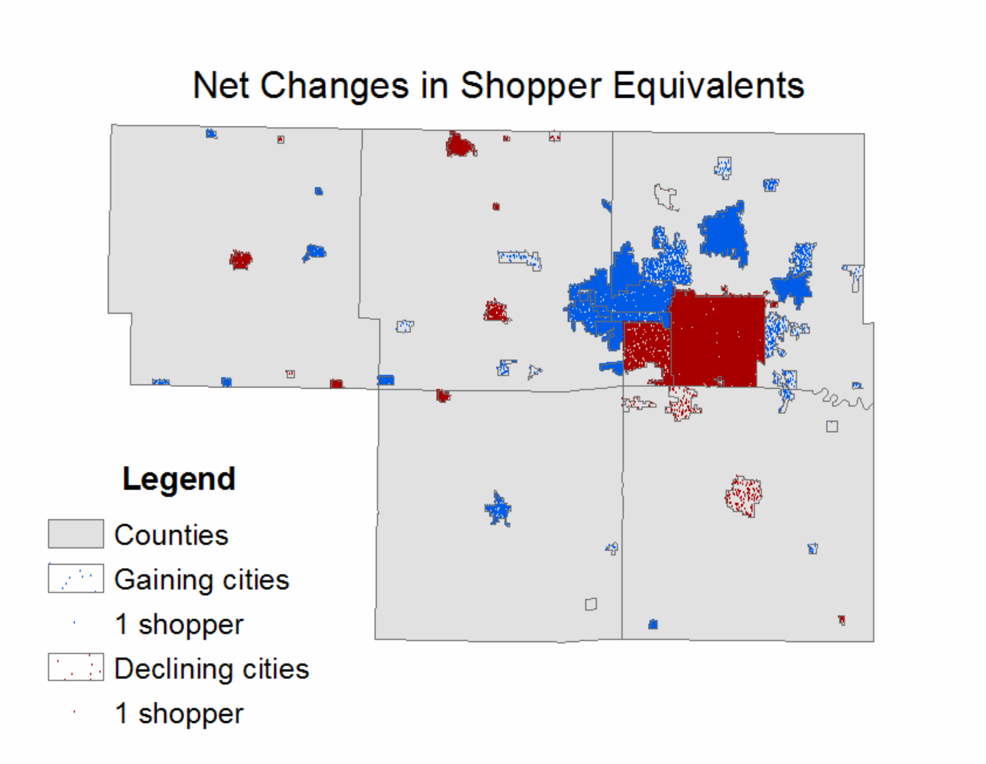
Map 2.



After adjusting for population changes, there were also strong competitive position losses not just in the Des Moines and West Des Moines portions of Polk County, but in Johnston, Urbandale, Polk City, and Pleasant Hill. In Warren County, the Norwalk area and Indianola also posted noticeable erosions.

The last map is simply the sum of the two previous maps. It shows that while many of the MSA cities posted competitive declines, overall population growth offset many of those losses. Still the net erosions in shopper equivalents in Des Moines and West Des Moines in Polk County and in Perry and Adel in Dallas County are quite evident.

Map 3.



Discussion

We do not know where shifting shoppers are going or from where precisely they come, both from within the MSA and in the whole of the state. It is highly likely that the preponderance of the shifting that has occurred within the MSA, to include many of the net gains in new shopper equivalents, is due to the development of the Jordan Creek Town Center project.

The data that we have presented, however, document potent gains in other portions of the MSA. Strong additions in the Altoona area might be serving the ever-increasing commuter flows from Jasper and Marion Counties, and the gains in Ankeny are likely capturing sales from Story County to the North. Although the overall draw of the Jordon Creek Town Center development is obvious, one must assume that the vast majority of its sales gains can be attributed to sales shifts away from its nearest competing markets; namely, Des Moines, the Polk County portion of West Des Moines, and Urbandale.

The whole MSA realized full-time shopper equivalent gains of 36,989. We further assume that the vast majority of those net new shoppers came from counties that are adjacent to the MSA, most notably Story, Jasper, Marion, and Marshall County. The population center in each of those counties is less than an hour's drive from the MSA.

Table 1. Summary of Net Real Trade Changes, 2004-2006

	Real Change, FY 2004 and FY2006		
Area	Dollars	Percentage	Shopper-Equivalents
State of Iowa	310,130,308	1.0	29,572
Metro Region	387,801,073	5.5	36,979
Dallas County	313,674,297	86.9	29,910
Adel	-2,233,333	-5.6	-213
Bouton	-293,613	-3.5	-28
Clive	5,413,467	78.5	516
Dallas Center	413,175	6.5	39
De Soto	354,857	8.8	34
Dexter	3,243,484	164.7	309
Granger	1,794,550	25.5	171
Minburn	-332,905	-26.1	-32
Perry	-16,063,822	-16.8	-1,532
Redfield	114,597	4.9	11
Van Meter	52,926	0.8	5
Waukee	10,819,858	9.8	1,032
West Des Moines	310,758,537	503.7	29,632
Woodward	-124,284	-2.9	-12
Balance of Dallas County	-243,196	-6.3	-23
Guthrie County	-2,424,719	-4.3	-231
Adair	264,497	16.7	25
Bagley	-90,642	-24.1	-9
Bayard	489,213	23.4	47
Casey	944,914	52.4	90
Guthrie Center	-3,507,779	-18.0	-334
Menlo	-43,804	-4.3	-4
Panora	1,783,962	9.6	170
Stuart	-2,716,513	-28.4	-259
Yale	563,549	116.4	54
Balance of Guthrie County	-112,116	-12.8	-11
Madison County	6,982	0.0	1
Earlham	-2,047,677	-20.4	-195
St Charles	122,094	4.4	12
Truro	15,044	0.8	1
Winterset	3,136,979	5.1	299
Balance of Madison County	-1,219,458	-29.8	-116
Polk County	75,465,619	1.2	7,196
Alleman	307,108	23.9	29
Altoona	103,950,354	46.7	9,912
Ankeny	74,572,980	17.0	7,111
Bondurant	2,044,414	21.6	195
Clive	5,906,443	1.9	563
Des Moines	-193,588,586	-5.2	-18,460
Elkhart	607,833	18.0	58
Grimes	54,732,339	45.3	5,219
Johnston	9,075,091	7.7	865
Mitchellville	125,438	4.7	12
Pleasant Hill	1,850,305	7.0	176
Polk City	-48,654	-0.5	-5
Runnells	108,278	3.4	10
Urbandale	32,203,936	6.7	3,071
West Des Moines	-21,992,386	-2.4	-2,097
Windsor Heights	4,875,422	25.4	465
Balance of Polk County	735,305	5.2	70
Warren County	1,078,894	0.5	103
Carlisle	930,210	6.6	89
Cumming	-172,193	-10.1	-16
Hartford	13,228	1.6	1
Indianola	-1,270,953	-0.9	-121
Lacona	-205,839	-10.4	-20
Milo	123,630	4.0	12
New Virginia	2,089,535	165.8	199
Norwalk	-923,475	-2.6	-88
Balance of Warren County	494,750	12.2	47